IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

EX PARTE SMITH et al.

Application for Patent

Filed: July 31, 2003

Application No. 10/633,020

FOR:

SMART CARD PERSONALIZATION ASSISTANCE TOOL

APPEAL BRIEF

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I. REAL PARTY IN INTEREST

The real party in interest is Visa International Service Association, a subsidiary of Visa Inc.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or judicial proceedings known to the Appellants.

III. STATUS OF CLAIMS

Allowed claims: None

Claims objected to: None

Claims rejected: 1-6 and 11-16.

IV. STATUS OF AMENDMENTS

A response was filed by Applicant on September 8, 2009 in response to a Final Office action dated July 8, 2009; no amendments were presented.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A personalization assistant software tool is used by smart card issuers (such as banks) to tailor a batch of smart cards to best suit their market needs. Often card issuers become mired in the technical details of personalizing smart cards before delivering them to their customers and, consequently, lose sight of the business and risk management decisions that should dictate smart card features. Card issuers use the personalization tool for selecting and choosing appropriate values for these business and risk

management decisions. The personalization assistant guides issuers through the decision-making process of selecting their desired options and prompts. Issuers respond to a series of business questions. Responses to these questions are used by the personalization tool to generate a set of smart card parameters and values, representing the issuer's business and risk requirements for smart card debit and credit applications. The personalization assistant assists the card issuer with default values and queries. The actual mechanics of identifying the data values to be used in the data personalization process is transparent to the issuer, who is then free to focus on the business and risk management aspects. The software tool then generates a personalization data file suitable for personalizing the issuer's batch of smart cards.

Claim 1 recites a method of automating the personalization of a batch of smart cards originating with a smart card issuer. The process begins with executing a personalization assistant software tool (page 10, lines 19-22; Fig. 5, step 416; Fig. 3, 320; Figs. 31 and 32), the software tool including a default member profile (Fig. 8) having default values for smart card features (Fig. 15, 1504), a smart card feature being a parameter representing a business requirement of the smart card issuer dictating smart card usage. (Page 5, lines 15-20; Fig. 16, 1604; Fig. 17, 1704; page 14, page 31). A user is provided with queries regarding the smart card features, the queries originating from the personalization software tool. (Page 11, lines 7-10; Fig. 4, 408). Responses to the queries are received by the software tool from the user, where the responses reflect smart card features desired by the card issuer. (Page 11, lines 10-12; Fig. 4, 412). The responses are matched with output data values, wherein the matching is performed by the software tool, and where each of the output data values represent one of the smart card features and is suitable for personalizing a smart card. (Page 11, line 29 – page 12, line 6; Fig. 5, 504). The default member profile is modified to include the matched output data values, where the output data values replace corresponding default values for the smart card features. (Page 15, lines 26-28; page 16, lines 6-10; Fig. 10, 1012; Fig. 12, 1204). A personalization data file is generated from the modified default member profile, the personalization data file being suitable for personalizing the smart cards and providing the smart card features on each smart card by way of the output data values. (Page 11, lines 12-14; page 12, lines 7-8; Fig. 4, 416).

Claim 11 recites a computer-implemented method of automating the personalization of a batch of smart cards originating with a smart card issuer. The process begins with executing, on a host computer (page 10, lines 18-24; Fig. 3, 316), a personalization assistant software tool (page 10, lines 19-22; Fig. 5, step 416; Fig. 3, 320; Figs. 31 and 32), the software tool including a default member profile (Fig. 8) having default values for smart card features (Fig. 15, 1504), a smart card feature being a parameter representing a business requirement of the smart card issuer dictating smart card usage. (Page 5, lines 15-20; Fig. 16, 1604; Fig. 17, 1704; page 14, page 31). A user is provided, over a network (page 10, lines 17-19; Fig. 3, 312), with queries regarding the smart card features, the queries originating from the personalization software tool. (Page 11, lines 7-10; Fig. 4, 408). Responses to the queries are received by the software tool from the user over the network (page 10, lines 17-19; Fig. 3, 312), where the responses reflect smart card features desired by the card issuer. (Page 11, lines 10-12; Fig. 4, 412). Combinations of responses are matched with output data values by the personalization assistant software tool. (Page 27, line 24 – page 28, line 3; Fig. 49; Fig. 31, 3104). The default member profile is modified to include the matched output data values, where the output data values replace corresponding default values for the smart card features. (Page 15, lines 26-28; page 16, lines 6-10; Fig. 10, 1012; Fig. 12, 1204). A personalization data file is generated from the modified default member profile, the personalization data file being suitable for personalizing the smart cards and providing the smart card features on each smart card by way of the output data values. (Page 11, lines 12-14; page 12, lines 7-8; Fig. 4, 416). The smart cards are personalized utilizing the personalization data file which contains smart card features on each smart card by way of the output data values. (Page 11, lines 13 – 23; Fig. 4, 420).

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The rejections presented for review are as follows:

Claims 1-3, 6, 11-13 and 16 are rejected under 35 U.S.C. §103 as being unpatentable over *Tushie et al.* (U.S. Pat. No. 6,014,748) in view of *Du* (U.S Pub. No. 2001/0042212). Claims 4, 5, 14, and 15 are rejected under 35 U.S.C. §103 as being unpatentable over *Tushie et al.* in view of *Du*, and further in view of *Anderson et al.* (U.S. Pat. No. 5,884,289).

VII.   ARGUMENT

With respect to the grounds above, the rejected claims are argued as a single group.

A. The Present Invention

i) General Overview

The present invention addresses ways for a smart card issuer to automatically personalize a batch of smart cards before delivering the cards to customers. Figure 3 shows a personalization tool 320 on a host computer that generates a data file 138 that is used eventually in a personalization device 150 to personalize smart cards.

The process begins with running a personalization software tool on a host computer in order to ask a smart card issuer questions about the issuer's business and risk management requirements with respect to smart card usage. The answers to these questions are used to obtain specific values. A personalization data file is generated based on these specific data values. The personalization data file—generated by asking questions of the card issuer and evaluating the responses—may then be used by the card issuer to personalize the actual smart cards. The invention uses what is referred to as a "smart card feature" to carry out this process.

A smart card feature is a parameter representing a business or risk management requirement or preference of the smart card issuer and is derived from asking questions of the card issuer. A personalization assistant software tool (item 320 in Figure 3) presents such queries to the issuer. An example of this is shown in Figure 31. In this screen shot, the card issuer is presented with seven queries relating to cardholder verification methods (CVM) -- an area that may fall under risk management requirements of the card issuer. A responds to these queries by clicking on a "Yes" or "No" button. Figure 32 shows sample smart card features based on the responses to the queries presented in Figure 31. For example, for the fifth query: "Manual cash and purchase transactions with cashback?," a smart card feature is "Signature is required when the device does not support Online PIN." For the sixth query: "Purchase transactions without cashback?," a smart card feature is "Offline Enciphered PIN is used if the device supports it." Other examples of queries presented to the issuer by the personalization assistant software may be found in Figure 36 ("Making Your Offline Data Authentication Risk Management Decisions") and in Figure 38 ("Defining Your Issuer Authentication Options"). As described below, the processes of the invention allow card issuers to focus on the business and risk requirements instead of on the technical and engineering aspects needed to encode these requirements onto smart cards. By personalizing the smart card with smart card features and output data values, the card can operate without instructions from the card issuer. Thus, when the smart card is being used and a smart card feature is invoked, the card does not have to receive any instructions from the card issuer with respect to the feature because the answer is already encoded upon the card in an output data value.

ii) Interpretation of "Smart card feature"

Claims 1 and 11 recite in the first step that "a smart card feature is a parameter representing an issuer business requirement dictating smart card usage." As noted above, a "smart card feature" is a business or risk management requirement of the smart card issuer, such as whether or not to require a signature or a PIN when a smart card is used. Support for this limitation may be found at pages 5 and 6 of the specification:

> The personalization assistant guides issuers through the decision-making process of selecting their desired debit/credit options. Issuers are requested to respond to a series of business questions. Responses to these questions will be used by the tool to generate a set of debit/credit parameters and values, representing the issuer's business and risk requirements for the debit/credit application. . . . The actual mechanics of capturing the data to be used…will be transparent to the Issuer who is then free to focus on the business/risk management aspects of this process.

Other sections of the specification also support this description of "smart card features." For example, Figures 16 and 17 describe various business requirements and the screen shot in Figure 16 provides: "In addition, you can support optional features based on your market requirements." Page 14 (describing Figure 8) states: " . . . responses to a plurality of queries form business decisions 804, which are provided as input to the personalization assistant 320." In another example, page 31 of the specification states that "the invention provides a user friendly tool that is able to take business related answers to generate technical settings . . . without requiring the understanding of the technical settings."

A claim term must be interpreted by first looking at the intrinsic evidence, which begins by looking at the claims themselves and the specification. As the claim language and the citations to the specification above show, Applicant has provided explicit claim language and numerous examples and explanations throughout the specification to clarify what it means by "smart card features." Therefore, following established tenets of claim construction, this term must be interpreted as a parameter representing an issuer's business requirements that dictate usage of the smart card by customers, and not something different such as a customer account number.

B. The *Tushie* Reference

With this description of smart card features and output data values in mind, we now turn to the cited references. The primary reference in the §103 rejection is *Tushie*.

i) *Tushie* Does Not Disclose "smart card features"

Tushie uses the term "personalization" but in an entirely different context from that of the claimed invention. The personalization data in *Tushie* does not relate at all to

smart card features as decided by a smart card issuer, but rather is directed to <u>basic</u> <u>cardholder data</u>, such as name, account number, expiration date, and so on. This type of basic cardholder data is not a smart card feature as claimed. Basic cardholder data <u>is not</u> "<u>a parameter representing an issuer business requirement dictating smart card usage</u>" as required in claims 1 and 11.

ii) <u>*Tushie* Does Not Disclose Querying a User and Receiving Responses</u>

The second and third steps of claims 1 and 11 require that the user be queried regarding the smart card features, and that the user provide responses reflecting smart card features desired by the card issuer. The Office action (page 4, lines 5-8) cites *Tushie* as disclosing the step of receiving responses to queries reflecting smart card features. But, cardholder data 152 in Figure 1B of *Tushie* is standard personalization data that is unique to each cardholder. As explained above, this data is entirely different from the smart card feature data and their output data values of claims 1 and 11. Also, as previously explained, this personalization data comes from the card issuer unchanged. There is no opportunity for any individual in *Tushie* to respond to queries and provide responses indicating values for particular smart card features. In the present invention, the second and third steps require that the user using the personalization assistant software tool not only is presented with queries but also provides responses, specifically, smart card feature information.

Moreover, even if the personalization data in *Tushie* was in some manner analogous to the claimed "smart card features" (which Applicant denies), the creation of smart card features and data values by <u>querying</u> a smart card issuer is not disclosed in *Tushie*. Claim 1 specifically requires:

> providing a user with a plurality of queries regarding said smart card features, said queries originating from said software tool; and
>
> receiving from the user, responses to the plurality of queries, said responses being received by said software tool and reflecting smart card features desired by said smart card issuer.

Thus, claims 1 and 11 require determining the smart card features desired by the smart card issuer by querying a user of the personalization assistant software tool. There is no such querying disclosed in *Tushie*. As shown in Figures 1A and 1B of *Tushie*, basic

cardholder data is sent from a database 152 straight to system 150 and then on to personalization system 100. This data is not modified or generated by queries; it comes unchanged straight from a database. In other words, the personalization data in *Tushie* is simply transmitted from the card issuer and is not changed or modified in any way. (See *Tushie*, "Data" from 150 to 100 in Figure 1A and cardholder data moved from 152 to 150 to 100 in Figure 1B.)

In *Tushie,* there are no queries presented to any party or responses evaluated in order to create the personalization data. *Tushie* focuses on taking raw cardholder personalization data (which is actually basic cardholder data, as opposed to business and risk management data of the card issuer) and simply delivering it unchanged to system 100.

iii) *Tushie's* "data format template" and "card framework template record" Do Not Disclose "smart card features"

The final Office action cites the "card framework template record" in *Tushie* (columns 2 and 18), as disclosing the claimed smart card features. At the top of page 4 of the final Office action, it is pointed out that entries such as the account name and account number correspond to the claimed "default values for smart card features." But, an account name and an account number are simply static data specific to a particular cardholder. These values do not reflect a <u>business</u> requirement of the smart card issuer dictating how the smart card must be used, such as whether or not a signature is required.

The Office action also cites the "card framework template record" as disclosing smart card features and their values. But, this template merely "describes the structure of the chip on the card" (*Tushie* column 18, lines 5-6). For example, Figure 11 in *Tushie* shows the card framework template. It includes technical information such as system definitions, templates for embossing or for the magnetic stripe, application data, etc. (See *Tushie*, column 17, lines 26-31). This cardholder data does not disclose or suggest high-level issuer business requirement data.

In addition, the modifying and generating steps of the claims require that the output data value for a smart card feature is used to personalize a batch of smart cards. In

other words, the smart card feature is applied to the <u>entire</u> batch of smart cards; each smart card <u>has the same value</u> for a particular feature. By contrast, in *Tushie*, data such as account name and account number <u>must be different</u> for each and every smart card. Therefore, data entries, such as account name or number <u>cannot</u> correspond to default values for smart card features as claimed.

Page 3 of the final action cites the "data format template" disclosed in *Tushie*. As explained in *Tushie* the point of the issuer "data format template" is to allow the personalization system in *Tushie* to interface with multiple card issuer systems while ensuring that the personalization data is formatted correctly for each system. (Column 2, lines 54-59). By contrast, the invention of claims 1 and 11 is not interfacing with different issuer systems; smart card features of the claimed invention are elicited from the card issuer and applied to a batch of smart cards. The "data format template" in *Tushie* does not disclose smart card features and their values because the "data format template" simply tells the personalization system in *Tushie* how to use individual cardholder data.

C. *Du* Does not Disclose Smart Card Features

The Office action on page 4 cites *Du* as disclosing the second step of claim 1: "providing a user with a plurality of queries regarding smart card features." But, *Du* cannot possibly disclose queries regarding smart card features because *Du* discloses queries related to configuring the user's personal computing environment (paragraph 48). A smart card issuer's business requirement regarding how a batch of smart cards must be used is entirely different from a question to a computer user regarding his or her favorite Web site. As noted, "smart card features" must be interpreted as a parameter representing an issuer's business requirements that dictate usage of the smart card by customers. Although *Tushie* shows cardholder data and *Du* discloses personal configuration queries to a user, neither shows smart card features as claimed.

D. Not Obvious to Combine Because *Du* is Non-analogous Art

It would not have been obvious to combine *Du* with *Tushie* because the art is entirely different. *Tushie* deals with trying to make personalization data suitable for any type of smart card personalization equipment, while *Du* deals with creating a portable

computing environment. One of skill in the art trying to personalizing a smart card would not be concerned with how to make it easier to make a computing environment portable.

More specifically, *Tushie* deals with the personalization of batches of smart cards by a bank using personalization equipment before the smart cards are delivered to users (Figure 1A). It describes a manufacturing process that involves feeding, for example, thousands of blank smart cards into sophisticated personalization equipment where they are stamped, embossed, programmed, etc. *Tushie* deals primarily with how to personalize these smart card batches using a variety of types of personalization equipment.

By contrast, *Du* deals with how a computer user might replicate their office computing environment on a computer in a remote office. The user possesses a smart card, but the card has long since been manufactured, personalized and issued by the bank to the user. The user is able to transfer a representation of their computing environment onto the smart card and then insert the smart card into a remote computer to help transfer that computing environment. The result is that the user is able to use their familiar browser, bookmarks, word processing templates, etc. A smart card is not required; one might transfer the data using a hard disk or other portable memory device.

The only element that *Du* and *Tushie* have in common is that the two references use the term "smart card." An analogy might be if one reference dealt primarily with programming the firmware of thousands of laptop computers in a factory, and a second reference dealt with how a single user might use a single laptop to read e-mail. The two references would not be analogous.

For these reasons, one of skill in the art of personalizing smart cards (such as *Tushie*) would not be motivated to inquire into the field of "how can I move my bookmarks from one computer to another?" (such as *Du* discloses), and would be unaware of the art in that field. Therefore, one of skill would not be motivated to combine the two references.

Finally, *Du* is not in the field of Applicant's endeavor as suggested in the Advisory Action (continuation of Item 11, note 3). *Du* is in the field of moving a user's personal computing environment from one computer to another, while the present invention, as well as the invention in *Tushie*, deals with the manufacturing of smart cards. A person of ordinary skill in the field of manufacturing batches of smart cards would not have any apparent reason to look in *Du*'s field of mobile personal computing to improve on a system in *Tushie*'s field of manufacturing smart cards and storing cardholder data on smart cards. The Advisory Action provides that *Du* is in the field of smart cards, however, smart cards are only used as a means for storing a user's personal computing configuration. They are using the smart card as an end product, downstream from the actual manufacturing of the smart card. The present invention and *Tushie* deal with manufacturing the smart card, an activity that may be described as being upstream in the smart card lifecycle. As such, there is no apparent reason to combine *Du* with *Tushie*.

For these reasons, it is respectfully submitted that claims 1 and 11 are not unpatentable over *Tushie* in view of *Du*.

E. "Personalization data file" Is Not Disclosed

The claims also recite the step of generating a "personalization data file" used for personalizing a batch of smart cards by providing smart card features on each smart card in the batch. Neither *Du* or *Tushie*, alone or in combination, discloses or suggests generating the claimed personalization data file. The term "personalization data file" must be interpreted in light of the claims and specification. The claim language requires that it be generated from a modified default member profile and that it be suitable for personalizing a <u>batch</u> of smart cards using output data values, the output data values representing smart card features. The final action cites a section of *Du* that describes updating indices related to the user's personal computing environment. This has no bearing on the claimed personalization data file. No such file is mentioned or implied in *Du*. The final action also cites a section of *Tushie* describing a system for personalizing a smart card with cardholder data. However, as described above, *Tushie* discloses a system in which smart cards are personalized with individual cardholder data, such as account

number, user name, address, and so on. This is in contrast to the claimed feature data representing a business requirement of the smart card issuer.

F. Final Step of Claim 11 Is Not Disclosed

Furthermore, claim 11 recites the step of actually personalizing the batch of smart cards using the personalization data file. As noted, this personalization data file includes output data values that represent the smart card features desired by the smart card issuer. The final action cites the personalization system in *Tushie*. However, as noted earlier, *Tushie* uses the term "personalization" in a different context from that of the claimed invention. The personalization data in *Tushie* does not relate at all to smart card features as decided by a smart card issuer, but rather is directed to basic cardholder data. Basic cardholder data is not "a parameter representing an issuer business requirement dictating smart card usage" as required in claim 11.

XIII. CONCLUSION

In view of the foregoing, Appellants respectfully request that the Board reverse the Examiner's rejection of all pending claims. In addition, Appellants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

Respectfully Submitted,

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IX. CLAIMS APPENDIX

CLAIMS ON APPEAL

1. (rejected)   A method for automating the personalization of a batch of smart cards that originates with a smart card issuer, said method comprising:

executing a personalization assistant software tool, said software tool including a default member profile having default values for smart card features, a smart card feature being a parameter representing a business requirement of said smart card issuer dictating smart card usage;

providing a user with a plurality of queries regarding said smart card features, said queries originating from said software tool;

receiving from the user, responses to the plurality of queries, said responses being received by said software tool and reflecting smart card features desired by said smart card issuer;

matching each of said responses with an output data value, said matching being performed by said software tool, each of said output data values representing one of said smart card features and being suitable for personalizing a smart card;

modifying said default member profile to include said matched output data values, said output data values replacing corresponding said default values for smart card features; and

generating a personalization data file from said modified default member profile, wherein said personalization data file is suitable for personalizing said batch of smart cards and provides said smart card features on each smart card in said batch of smart cards by way of said output data values.

2. (rejected)   The method, as recited in claim 1, further comprising:

using individual cardholder input files and the personalization data file to personalize said batch of smart cards to yield a plurality of personalized smart cards.

3. (rejected)   The method, as recited in claim 1, wherein said matching includes:

providing a look up table with entries for various combinations of responses to the plurality of queries;

finding a matching entry in the look up table that matches the responses to the plurality of queries;

locating one of said output data values associated with the matching entry; and

outputting the one of said output data values associated with the matching entry.

4. (rejected)   The method, as recited in claim 1, wherein the plurality of queries, comprise:

at least one query regarding smart card account usage control;

at least one query regarding smart card account risk management; and

at least one query regarding offline limits and thresholds.

5. (rejected)   The method, as recited in claim 4, wherein responses to the plurality of queries are used to provide best practices recommendations.

6. (rejected)   The method, as recited in claim 1, further comprising:

providing regional profiles and subregional profiles, wherein a subregion is within a region, wherein the regional and subregional profiles have mandatory and recommended settings, wherein some of the subregional profiles are more stringent than regional profiles in which the subregions belong.

7. - 11 (Cancelled)

11. (rejected)   A computer implemented method for automating the personalization of a batch of smart cards that originates with a smart card issuer, comprising:

running on a host computer a personalization assistant software application, said software application including a default member profile having default values for smart card features, a smart card feature being a parameter representing an issuer business requirement dictating smart card usage;

providing to at least one user over a network a plurality of queries regarding said smart card features, said queries originating from said software application;

receiving from the at least one user over the network responses to the plurality of queries, said responses being received by said software application and reflecting smart card features desired by said smart card issuer;

matching each of a plurality of combinations of said responses with an output data value, said matching being performed by said software application;

modifying said default member profile to include said matched output data values, said output data values replacing corresponding said default values for smart card features;

generating a personalization data file from said modified default member profile, wherein said personalization data file is suitable for personalizing said batch of smart cards and provides said smart card features on each smart card in said batch of smart cards by way of said output data values; and

personalizing said batch of smart cards utilizing said personalization data file, said personalization data file providing said smart card features on each smart card in said batch of smart cards by way of said output data values.

12. (rejected)   The computer implemented method, as recited in claim 11, further comprising:

sending the personalization data file to a preparation processing device; and

using the personalization data file and cardholder input files to personalize smart cards.

13. (rejected) The computer implemented method, as recited in claim 11, wherein said matching includes:

providing a look up table with entries for various combinations of responses to the plurality of queries;

finding a matching entry in the look up table that matches the responses to the plurality of queries;

locating one of said output data values associated with the matching entry; and

outputting the one of said output data values associated with the matching entry.

14. (rejected) The computer implemented method, as recited in claim 11, wherein the plurality of queries, comprise:

at least one query regarding smart card account usage control;

at least one query regarding smart card account risk management; and

at least one query regarding offline limits and thresholds.

15. (rejected) The computer implemented method, as recited in claim 14, wherein responses to the plurality of queries are used to provide best practices recommendations.

16. (rejected) The computer implemented method, as recited in claim 11, further comprising providing regional profiles and subregional profiles, wherein a subregion is within a region, wherein the regional and subregional profiles have mandatory and recommended settings, wherein some of the subregional profiles are more stringent than regional profiles in which the subregions belong.

17.- 35.   (Cancelled)

X.   EVIDENCE APPENDIX

No evidence has been submitted pursuant to §§ 1.130, 1.131, or 1.132 of 37 CFR, nor has any other evidence been entered by the examiner.

XI.   RELATED PROCEEDINGS APPENDIX

There have been no decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 CFR 41.37(c)(1).